REMARKS

Claims 1-24 and 26-28 are now pending in the application. Claims 1, 13, and 24 are amended. Support for the amendments can be found in the originally filed specification at paragraph [0031]. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-5, 8-9, 12-16, and 21-28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Fussell (U.S. Pat. No. 4,023,071). This rejection is respectfully traversed.

Applicants respectfully note that the rejection of claim 25 is moot in view of its previous cancellation in the previously filed response.

The teachings of Fussell are generally directed toward a transient and surge protection apparatus. In particular, the Examiner relies on Fussell to teach a varistor connected in series with a gas discharge tube (GDT) in a circuit having a live line, a second line, and a ground line. The GDT of Fussel is taught to be an "indicator lamp" such as a neon lamp, which functions merely to alert the user rather than clamp voltage. Neon lamps suitable for the application of Fussell typically have a trigger voltage less than 100V, and are therefore unsuitable for use in clamping voltage during hi-pot testing. Accordingly, Fussell does not teach use of a GDT having a trigger voltage greater than 1230V, the GDT being operably connected to clamp voltage in the surge protector by diverting excess voltage from one of a live line and a second line to a ground line.

The Examiner has remarked that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a trigger voltage of 1230 volts, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Applicant respectfully directs the Examiner's attention to M.P.E.P. § 2144.5 II(B), stating in relevant part:

> A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (The claimed wastewater treatment device had a tank volume to contractor area of 0.12 gal./sq. ft. The prior art did not recognize that treatment capacity is a function of the tank volume to contractor ratio, and therefore the parameter optimized was not recognized in the art to be a result-effective variable).

Applicant respectfully notes that voltage clamping effect of a GDT is a function of its trigger voltage. In particular, in order to clamp voltage by diverting excess voltage to ground, the trigger voltage of the GDT has to be set above the voltage of normal operation, but below a surge voltage. For example, Applicant respectfully directs the Examiner's attention to claims 2, 14, and 26, which, as originally filed, specify that the trigger voltage of the GDT is higher than a high pot test voltage associated with normal operation. The Examiner has erroneously indicated column 2, lines 32-46 as teaching this subject matter, apparently confusing Fussel's Zener diodes (elements 40) with Fussel's Neon indicator lamp (elements 34) in Figure 3.

In contrast, Fussell uses a blown fuse instead of the indicator lamp to provide surge protection. In particular, Fussel's indicator lamp, in order to be lit after the fuse has blown and the surge abated, or else to be lit during normal operation (Fussel, col. 5, lines 32-46), must have a trigger voltage below a voltage of normal operation.

Therefore, Fussel's indicator lamp effectively teaches away from having a trigger voltage that is set high enough to trigger only under impending surge conditions, thus producing a voltage clamping effect. In other words, Fussel's indicator lamp is not operably connected to divert excess voltage to ground, especially where Fussel's indicator lamp needs to remain triggered at normal voltage levels, such as during normal operation or after the surge has abated. Moreover, since Fussel does not recognize that surge protection is a function of the trigger voltage of its indicator lamp, the trigger voltage of the Fussel's indicator lamp is not a result-effective variable. Accordingly, Applicant's determination of the claimed range of trigger voltage values cannot be fairly characterized as routine experimentation in view of Fussell.

Applicant's claimed invention is generally directed toward a motor drive for an electric machine, and method for insulation testing a motor drive for an electric machine. In particular, Applicant's claimed invention is directed toward use of a GDT having a trigger voltage greater than 1230V, the GDT being operably connected to clamp voltage in the surge protector by diverting excess voltage from one of a live line and a second line to a ground line. For example, independent claim 1, especially as amended, recites, "the trigger voltage is greater than 1230V ... said GDT being operably connected to clamp voltage in said surge protector by diverting excess voltage from one of said live line and said second line to said ground line." Claims 13 and 24, especially as amended, recite similar subject matter. Support for the amendments can be found in the originally filed specification at paragraph [0031]. Therefore, Fussell fails to teach all of the limitations of the independent claims.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of independent claims 1, 13, and 24 under 35 U.S.C. § 102(b), along with rejection on these grounds of all claims dependent therefrom.

REJECTION UNDER 35 U.S.C. § 103

Claims 6 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fussell (U.S. Pat. No. 4,023071) in view of Harlan et al. (U.S. Pat. No. 5,606,232). This rejection is respectfully traversed.

For discussion of the differences between the teachings of Fussel and Applicant's claimed invention, Applicant respectfully directs the Examiner's attention to remarks detailed above with respect to rejection under 35 U.S.C. § 102. Applicant respectfully reminds the Examiner that Fussel effectively teaches away from using a GDT to clamp voltage in a surge protector, especially where such a function of the GDT requires setting of the trigger voltage above a voltage of normal operation; such a setting prevents a GDT used as an indicator lamp from being lit during normal operation or else from lighting and remaining lit after the fuse has blown and the surge has abated (Fussel, col. 5, lines 32-46). Moreover, since the teachings of Fussel regarding the indicator lamp is that it is to be lit during normal operation or else to light and remain lit after the fuse has blown (Fussel, col. 5, lines 32-46), Applicant respectfully notes that Fussel cannot be modified to arrive at Applicant's claimed invention without rendering Fussel's indicator lamp unsatisfactory for its intended purpose (*see* MPEP § 2143.01 V, explaining that the proposed modification cannot render the prior art unsatisfactory for its intended purpose.) Therefore, Fussel does not teach, suggest, or motivate use of a GDT having a trigger voltage greater than 1230V, the GDT being operably connected to

clamp voltage in the surge protector by diverting excess voltage from one of a live line and a second line to a ground line.

The teachings of Harlan et al. are generally directed toward a DC on line AC brushless motor. In particular, the Examiner relies on Harlan et al. to teach a rectifier. However, Harlan et al. do not teach, suggest, or motivate use of a GDT having a trigger voltage greater than 1230V, the GDT being operably connected to clamp voltage in the surge protector by diverting excess voltage from one of a live line and a second line to a ground line.

Applicant's claimed invention is generally directed toward a motor drive for an electric machine, and method for insulation testing a motor drive for an electric machine. In particular, Applicant's claimed invention is directed toward use of a GDT having a trigger voltage greater than 1230V, the GDT being operably connected to clamp voltage in the surge protector by diverting excess voltage from one of a live line and a second line to a ground line. For example, independent claim 1, especially as amended, recites, "the trigger voltage is greater than 1230V ... said GDT being operably connected to clamp voltage in said surge protector by diverting excess voltage from one of said live line and said second line to said ground line." Claim 13 especially as amended, recites similar subject matter. Support for the amendments can be found in the originally filed specification at paragraph [0031]. Therefore, Fussell and Harlan et al. fail to teach, suggest, or motivate all of the limitations of the independent claims. These differences are significant because the recited trigger voltage allows the surge protector to effectively clamp voltage during a surge without interfering with hi-pot

testing of an electric machine as discussed at paragraphs [0007], [0023], and [0026]-[0031].

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of dependent claims 6 and 17 under 35 U.S.C. § 103(a) in view of their dependence from allowable base claims 1 and 13.

Claims 7 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Fussell (U.S. Pat. No. 4,023071) in view of Harlan et al. (U.S. Pat. No. 5,606,232) and Nakamura (U.S. Pub. No. 2002/0163820). This rejection is respectfully traversed.

For discussion of the differences between Applicant's claimed invention and the teachings of Fussel and Harlan et al., Applicant respectfully directs the Examiner's attention to remarks detailed above with respect to rejection under 35 U.S.C. § 102. Applicant respectfully reminds the Examiner that Fussel effectively teaches away from using a GDT to clamp voltage in a surge protector, especially where such a function of the GDT requires setting of the trigger voltage above a voltage of normal operation; such a setting prevents a GDT used an indicator lamp from being lit during normal operation, or else lighting and remaining lit after the fuse has blown and the surge has abated (Fussel, col. 5, lines 32-46). Moreover, since the teachings of Fussel regarding the indicator lamp (Fussel, col. 5, lines 32-46) is that it is to be lit during normal operation or else light and remain lit after the fuse has blown, Applicant respectfully notes that Fussel cannot be modified to arrive at Applicant's claimed invention without rendering Fussel's indicator lamp unsatisfactory for its intended purpose (*see* MPEP § 2143.01 V, explaining that the proposed modification cannot render the prior art unsatisfactory for its intended purpose.) Therefore, Fussel and Harlan et al. do not

teach, suggest, or motivate use of a GDT having a trigger voltage greater than 1230V, the GDT being operably connected to clamp voltage in the surge protector by diverting excess voltage from one of a live line and a second line to a ground line.

The teachings of Nakamura are generally directed toward a power converter apparatus using power device. In particular, the Examiner relies on Nakamura to teach a doubler type rectifier. However, Nakamura does not teach, suggest, or motivate use of a GDT having a trigger voltage greater than 1230V, the GDT being operably connected to clamp voltage in the surge protector by diverting excess voltage from one of a live line and a second line to a ground line.

Applicant's claimed invention is generally directed toward a motor drive for an electric machine, and method for insulation testing a motor drive for an electric machine. In particular, Applicant's claimed invention is directed toward use of a GDT having a trigger voltage greater than 1230V the GDT being operably connected to clamp voltage in the surge protector by diverting excess voltage from one of a live line and a second line to a ground line. For example, independent claim 1, especially as amended, recites, "the trigger voltage is greater than 1230V ... said GDT being operably connected to clamp voltage in said surge protector by diverting excess voltage from one of said live line and said second line to said ground line." Claim 13, especially as amended, recites similar subject matter. Support for the amendments can be found in the originally filed specification at paragraph [0031]. Therefore, Fussell, Harlan et al., and Nakamura fail to teach, suggest, or motivate all of the limitations of the independent claims. These differences are significant because the recited trigger voltage allows the surge protector to effectively clamp voltage during a surge without interfering with hi-pot

testing of an electric machine as discussed at paragraphs [0007], [0023], and [0026]-[0031].

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of independent claims 7 and 18 under 35 U.S.C. § 103(a) in view of their dependence from allowable base claims 1 and 13.

ALLOWABLE SUBJECT MATTER

In the present Office action, the Examiner indicates that these claims 10-11 and 19-20 are rejected in the Office Action Summary, but presents no grounds of rejection for these claims. In the previous Office action, the Examiner stated that claims 10-11 and 19-20 would be allowable if rewritten in independent form. Moreover, the Examiner again indicates that claims 10-11 and 19-20 would be allowable if rewritten in independent form. In the previous response, Applicant amended claim 10 to include the limitations of the base claim and any intervening claims, and amended claim 19 to include subject matter similar to that recited in amended claim 10. Therefore, claims should be in condition for allowance.

Accordingly, Applicant respectfully requests that any outstanding rejections or objections to claims 10-11 and 19-20 be withdrawn.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: 8/1/06

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